

and any fees required therefor (including fees for net addition of claims) are hereby
authorized to be charged to our Deposit Account No. 19-0036.

Amendments

In the Claims:

✓ ✓ ✓ ✓ ✓ ✓
Please cancel claims 71-78, 94-97, and 101-103.

Please replace pending claims 68-70, 79, 98, 112-114, 117, and 119 with the following claims
68-70, 79, 98, 112-114, 117, and 119:

68. (twice amended) A method for selecting a nucleic acid molecule encoding a
target epitope of cytotoxic T-lymphocytes, comprising:

(a) contacting mammalian host cells with cytotoxic T-lymphocytes
specific for said target epitope under conditions wherein a host cell expressing said target
epitope undergoes a lytic event upon contact with said T-lymphocytes; wherein said host cells
comprise a library of heterologous nucleic acid molecules, at least one of said heterologous
nucleic acid molecules encoding said target epitope, wherein said library is constructed in a
vaccinia virus vector which expresses said target epitope in said host cells, wherein said host
cells express a defined MHC molecule, and wherein said cytotoxic T-lymphocytes are
restricted for said MHC molecule; and

(b) recovering those host cells which undergo a lytic event.

H2 69. (once amended) The method of claim 68, further comprising isolating said
vector from said recovered host cells.

70. (twice amended) The method of claim 68, further comprising:

- (a) isolating said vector from said recovered host cells;
- (b) transferring said vector to a population of mammalian host cells,

H3 wherein said vector expresses said target epitope in said host cells, and wherein said host cells express a defined MHC molecule;

(c) contacting said host cells with cytotoxic T-lymphocytes specific for said target epitope and restricted for said MHC molecule, under conditions wherein a host cell expressing said target epitope will undergo a lytic event upon contact with said T-lymphocytes; and

- (d) recovering those host cells which undergo a lytic event.

H4 79. (twice amended) The method of claim 68, wherein said vector further comprises

a transcriptional control signal in operable association with said heterologous nucleic acid molecules, and wherein said transcriptional control signal functions in a vaccinia virus.

98. (once amended) The method of claim 68, wherein said library is constructed by

a method comprising:

- (a) cleaving a vaccinia virus genome to produce a first viral fragment and

H5 a second viral fragment, wherein said first fragment is nonhomologous with said second fragment;

(b) providing a population of transfer plasmids comprising said heterologous nucleic acid molecules flanked by a 5' flanking region and a 3' flanking region, wherein said 5' flanking region is homologous to said first viral fragment and said 3' flanking

H5 region is homologous to said second viral fragment; and wherein said transfer plasmids are capable of homologous recombination with said first and second viral fragments such that a viable virus genome is formed;

(c) introducing said transfer plasmids and said first and second viral fragments into a host cell under conditions wherein a transfer plasmid and said viral fragments undergo *in vivo* homologous recombination, thereby producing a viable modified virus genome comprising a heterologous nucleic acid molecule; and

(d) recovering said modified virus genome.

112. (twice amended) The method of claim 98, wherein said vaccinia virus genome comprises a modified thymidine kinase (tk) gene which comprises a 7.5k promoter, a unique NotI restriction site, and a unique ApaI restriction site.

H6 113. (twice amended) The method of claim 98, wherein said vaccinia virus genome comprises a modified thymidine kinase (tk) gene which comprises a synthetic early/late (E/L) promoter, a unique NotI restriction site, and a unique ApaI restriction site.

114. (twice amended) The method of claim 98, wherein the 5' and 3' flanking regions of said transfer plasmids are capable of homologous recombination with a vaccinia virus thymidine kinase gene.

H7

117. (once amended) The method of claim 68, wherein said host cells are a monolayer, and wherein those host cells which undergo a lytic event are released from said monolayer.

H8

119. (once amended) The method of claim 70, wherein said host cells are a monolayer, and wherein those host cells which undergo a lytic event are released from said monolayer.

Please add the following new claims 121-124:

121. (new) The method of claim 117, wherein said host cells are recovered as floating cells.

H9

122. (new) The method of claim 119, wherein said host cells are recovered as floating cells.

123. (new) The method of claim 68, wherein said host cells are recovered as floating cells.

124. (new) The method of claim 70, wherein said host cells are recovered as floating cells.